

## EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	5055	hydrosilylation	US-PGPU B; USPAT	OR	ON	2008/01/02 08:28
L2	2542	hydrosilation	US-PGPU B; USPAT	OR	ON	2008/01/02 08:28
L3	7094	I2 or I1	US-PGPU B; USPAT	OR	ON	2008/01/02 08:29
L4	260552	unsaturated	US-PGPU B; USPAT	OR	ON	2008/01/02 08:29
L5	4392	I4 and I3	US-PGPU B; USPAT	OR	ON	2008/01/02 08:29
L6	2024	I4 same I3	US-PGPU B; USPAT	OR	ON	2008/01/02 08:29
L7	496402	ether	US-PGPU B; USPAT	OR	ON	2008/01/02 08:29
L8	237	I7 same I6	US-PGPU B; USPAT	OR	ON	2008/01/02 08:31
L9	1606	I4 with I3	US-PGPU B; USPAT	OR	ON	2008/01/02 08:31
L10	179	I9 same I7	US-PGPU B; USPAT	OR	ON	2008/01/02 08:31
L11	0	I3/ti	US-PGPU B; USPAT	OR	ON	2008/01/02 08:31
L12	138	I3.ti.	US-PGPU B; USPAT	OR	ON	2008/01/02 08:32

## EAST Search History

L13	8	I10 and I12	US-PGPU B; USPAT	OR	ON	2008/01/02 08:32
L14	8	I12 and I10	US-PGPU B; USPAT	OR	ON	2008/01/02 08:33
L15	94	I9 and I12	US-PGPU B; USPAT	OR	ON	2008/01/02 08:33
L16	496402	ether	US-PGPU B; USPAT	OR	ON	2008/01/02 08:33
L17	71	I16 AND L15	US-PGPU B; USPAT	OR	ON	2008/01/02 08:33

## CAS ONLINE PRINTOUT

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(FILE 'HOME' ENTERED AT 08:18:48 ON 02 JAN 2008)

FILE 'CAPLUS' ENTERED AT 08:19:04 ON 02 JAN 2008

E US 20070055074/PN

L1 1 S E3  
L2 26680 S SILANES/IT  
L3 6495 S HYDROSILYLATION/IT  
L4 284371 S ETHERS/IT OR ETHER/IT  
L5 87 S L2 AND L3 AND L4  
L6 7620 S DIETHYL ETHER/IT  
L7 15031 S TETRAHYDROFURAN/IT  
L8 5592 S 1,4-DIOXANE/IT  
L9 636 S 112-73-2/IT  
L10 103364 S 25322-68-3/IT  
L11 129096 S L6 OR L7 OR L8 OR L9 OR L10  
L12 8 S L11 AND L5

=&gt; d bib abs kwic 1-8

L12 ANSWER 1 OF 8 CAPLUS COPYRIGHT 2008 ACS on STN  
AN 2007:220112 CAPLUS  
DN 146:300691  
TI Surface modified inorganic material and method for manufacture  
IN Jun, Chul-Ho; Yeon, Ye-Lim; Lee, Ji-Sung; Park, Young-Jun  
PA Industry-Academic Cooperation Foundation, Yonsei University, S. Korea  
SO PCT Int. Appl., 99pp.  
CODEN: PIXXD2  
DT Patent  
LA English  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2007024055	A1	20070301	WO 2006-KR1819	20060516
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	KR 2007023503	A	20070228	KR 2006-34139	20060414
	KR 2007023504	A	20070228	KR 2006-34140	20060414
	KR 749928	B1	20070816		
PRAI	KR 2005-77152	A	20050823		
	KR 2006-34139	A	20060414		
	KR 2006-34140	A	20060414		

AB This invention relates to a surface-modified inorg. material and a method for manufacture The invention provides a surface-modified inorg. material which is obtained by allowing an organosilane compound having allyl or an allyl derivative to react with an inorg. material, particularly solid silica or ITO glass, in the presence of an acid and an organic solvent, so as to introduce an organic group into the inorg. material even at room temperature, as well as a method for manufacture The invention can effectively introduce the

## CAS ONLINE PRINTOUT

organic group into the inorg. material even at room temperature, and thus is very effective in introducing compds. having a thermally sensitive functional group, for example, natural compds. or proteins. Also, the invention makes it possible to introduce various organic groups into an inorg. material and to sep. and purify organic mol.-bonded organosilane compds. using a silica gel column so as to effectively bond them to inorg. materials. The invention is very useful in chemical industry.

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

IT Silanes  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(organosilanes; surface modified inorg. material and method for manufacture)

IT 60-29-7, Ether, processes 67-56-1, Methanol, processes  
71-43-2, Benzene, processes 108-88-3, Toluene, processes 109-99-9,  
Tetrahydrofuran, processes 112-41-4, 1-Dodecene 2550-06-3,  
3-Chloropropyltrichlorosilane 5674-01-1, Methallyl-magnesium chloride  
7487-88-9, Sulfuric acid magnesium salt (1:1), processes 7647-14-5,  
Sodium chloride, processes 7727-37-9, Nitrogen, processes 12125-02-9,  
Ammonium chloride ((NH<sub>4</sub>)Cl), processes 15157-95-6, Methallyl  
50926-11-9, Indium tin oxide 56307-78-9, Dicyclohexylurea  
RL: PEP (Physical, engineering or chemical process); PROC (Process)  
(surface modified inorg. material and method for manufacture)

IT 872-17-3P, 10-Undecenyl chloride 750597-28-5P 928139-42-8DP,  
hydrosilylation products with amorphous silica 928139-43-9DP,  
hydrosilylation products with amorphous silica 928139-45-1DP,  
hydrosilylation products with amorphous silica 928139-45-1P  
928139-46-2DP, hydrosilylation products with amorphous silica  
928139-47-3DP, hydrosilylation products with amorphous silica  
928139-49-5DP, hydrosilylation products with amorphous silica  
928139-51-9DP, hydrosilylation products with amorphous silica  
928139-51-9P 928139-55-3DP, hydrosilylation products with  
amorphous silica 928139-55-3P 928139-59-7DP, hydrosilylation  
products with amorphous silica 928139-65-5DP, hydrosilylation  
products with amorphous silica 928139-65-5P 928139-68-8DP,  
hydrosilylation products with amorphous silica 928139-86-0P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(surface modified inorg. material and method for manufacture)

L12 ANSWER 2 OF 8 CAPLUS COPYRIGHT 2008 ACS on STN

AN 2006:1337553 CAPLUS

DN 146:229452

TI Intermolecular Chirality Transfer from Silicon to Carbon: Interrogation of  
the Two-Silicon Cycle for Pd-Catalyzed Hydrosilylation by  
Stereoisotopochemical Crossover

AU Rendler, Sebastian; Oestreich, Martin; Butts, Craig P.; Lloyd-Jones, Guy  
C.

CS Organisch-Chemisches Institut, Westfaelische Wilhelms-Universitaet  
Muenster, Muenster, D-48149, Germany

SO Journal of the American Chemical Society (2007), 129(3), 502-503  
CODEN: JACSAT; ISSN: 0002-7863

PB American Chemical Society

DT Journal

LA English

OS CASREACT 146:229452

AB A two-Si cycle for the highly efficient intermol. chirality transfer from  
Si to C (98-99% ct) in the Pd-catalyzed hydrosilylation by  
1,2,3,4-tetrahydro-1-silanaphthalene of 1,4-dihydro-1,4-methanonaphthalene  
emerges from a study involving catalytic crossover expts. with  
isotopically labeled Si-stereogenic silanes. A key outcome of these  
expts., which are supported by product-distribution modeling, is the

conclusion that the chirality transfer arises from thermodynamically controlled reversible silapalladation of the alkene rather than from kinetic control during irreversible  $\sigma$ -bond metathesis of the resulting  $\beta$ -silyl  $\sigma$ -alkyl Pd complex with chiral silane.

RE.CNT 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

- IT Isotope effect  
(deuterium primary kinetic isotope effect; intermol. chirality transfer from silicon to carbon in palladium-catalyzed hydrosilylation of norbornenes including interrogation of two-silicon cycle by stereoisotopochem. crossover)
- IT Asymmetric synthesis and induction  
(intermol. chirality transfer from silicon to carbon in palladium-catalyzed hydrosilylation of norbornenes including interrogation of two-silicon cycle by stereoisotopochem. crossover)
- IT Cycloalkadienes  
Silanes  
RL: PRP (Properties); RCT (Reactant); RACT (Reactant or reagent)  
(intermol. chirality transfer from silicon to carbon in palladium-catalyzed hydrosilylation of norbornenes including interrogation of two-silicon cycle by stereoisotopochem. crossover)
- IT Resolution (separation)  
(kinetic, of palladium-alkyl catalytic intermediate; intermol. chirality transfer from silicon to carbon in palladium-catalyzed hydrosilylation of norbornenes including interrogation of two-silicon cycle by stereoisotopochem. crossover)
- IT Hydrosilylation  
Hydrosilylation catalysts  
Hydrosilylation kinetics  
(stereoselective; intermol. chirality transfer from silicon to carbon in palladium-catalyzed hydrosilylation of norbornenes including interrogation of two-silicon cycle by stereoisotopochem. crossover)
- IT Chirality  
(transfer; intermol. chirality transfer from silicon to carbon in palladium-catalyzed hydrosilylation of norbornenes including interrogation of two-silicon cycle by stereoisotopochem. crossover)
- IT 924661-30-3P, 1-Isopropyl-1-((1R,2S,5R)-1-menthyloxy)-1,2,3,4-tetrahydro-1-silanaphthalene  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(chromatog. separation of diastereomers; intermol. chirality transfer from silicon to carbon in palladium-catalyzed hydrosilylation of norbornenes including interrogation of two-silicon cycle by stereoisotopochem. crossover)
- IT 120311-30-0, Dimethyl(1,10-phenanthroline)palladium 139362-04-2, Bis(diethyl ether)hydrogen(1+) tetrakis[3,5-bis(trifluoromethyl)phenyl]borate(1-)  
RL: CAT (Catalyst use); USES (Uses)  
(cocatalyst; intermol. chirality transfer from silicon to carbon in palladium-catalyzed hydrosilylation of norbornenes including interrogation of two-silicon cycle by stereoisotopochem. crossover)
- IT 4453-90-1, 1,4-Dihydro-1,4-methanonaphthalene  
RL: PRP (Properties); RCT (Reactant); RACT (Reactant or reagent)  
(intermol. chirality transfer from silicon to carbon in palladium-catalyzed hydrosilylation of norbornenes including interrogation of two-silicon cycle by stereoisotopochem. crossover)
- IT 776-76-1, Methyl diphenylsilane 1075-28-1, 1-Bromo-2-(3-bromopropyl)benzene 2216-51-5, (-)-Menthol 4170-46-1, Trichloroisopropylsilane 18171-74-9, tert-Butyltrichlorosilane 919513-61-4, (1S)-1-tert-Butyl-1,2,3,4-tetrahydro-1-silanaphthalene 924661-13-2, (1R)-1,2,3,4-Tetrahydro-1-isopropyl-1-silanaphthalene

## CAS ONLINE PRINTOUT

928220-59-1

RL: RCT (Reactant); RACT (Reactant or reagent)

(intermol. chirality transfer from silicon to carbon in  
palladium-catalyzed hydrosilylation of norbornenes including  
interrogation of two-silicon cycle by stereoisotopochem. crossover)

IT 143122-09-2P, (Deutero)(methyl)diphenylsilane 924661-19-8P  
924661-27-8P, 2-[(3-13C)-3-Bromopropyl]-1-bromobenzene 924661-28-9P  
924661-29-0P, 1,2,3,4-Tetrahydro-1-isopropyl-1-silanaphthalene  
924661-31-4P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(intermol. chirality transfer from silicon to carbon in  
palladium-catalyzed hydrosilylation of norbornenes including  
interrogation of two-silicon cycle by stereoisotopochem. crossover)

IT 924661-14-3P, (1R,2S,4R,SiR)-1-tert-Butyl-1-(1,2,3,4-tetrahydro-1,4-methanonaphthalen-2-yl)-1-sila-1,2,3,4-tetrahydronaphthalene  
924661-15-4P, (1S,2R,4S,SiR)-1-isopropyl-1-(1,2,3,4-tetrahydro-1,4-methanonaphthalen-2-yl)-1-sila-1,2,3,4-tetrahydronaphthalene  
924661-16-5P 924661-17-6P 924661-18-7P 924661-20-1P 924661-21-2P  
924661-22-3P 924661-23-4P 924661-24-5P 924661-25-6P 924661-26-7P  
924661-32-5P 924661-33-6P 924661-34-7P 924661-35-8P

RL: SPN (Synthetic preparation); PREP (Preparation)

(intermol. chirality transfer from silicon to carbon in  
palladium-catalyzed hydrosilylation of norbornenes including  
interrogation of two-silicon cycle by stereoisotopochem. crossover)

IT 851542-51-3P 919513-39-6P

RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(kinetic isotope effect; intermol. chirality transfer from silicon to  
carbon in palladium-catalyzed hydrosilylation of norbornenes  
including interrogation of two-silicon cycle by stereoisotopochem.  
crossover)

L12 ANSWER 3 OF 8 CAPLUS COPYRIGHT 2008 ACS on STN

AN 2005:324168 CAPLUS

DN 142:375569

TI Preparation of a halosilylated chain hydrocarbon

IN Saiki, Takeaki

PA Dow Corning Toray Silicone Co., Ltd., Japan

SO PCT Int. Appl., 35 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005033116	A1	20050414	WO 2004-JP14908	20041001
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
	RW:	BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
	JP 2006117532	A	20060511	JP 2003-344602	20031002
	EP 1668018	A1	20060614	EP 2004-773705	20041001
	EP 1668018	B1	20071128		

## CAS ONLINE PRINTOUT

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK

US 2007055074 A1 20070308 US 2006-573792 20061106

PRAI JP 2003-344602 A 20031002

WO 2004-JP14908 W 20041001

OS MARPAT 142:375569

AB The preparation of a chain hydrocarbon halosilylated at its terminal C atom(s) by subjecting a diene-type compound and a hydrohalosilane to a hydrosilylation reaction in the presence of a hydrosilylation catalyst and an ether compound having no aliphatic triple bond is described. Conducting a hydrosilylation reaction between a diene-type compound that has vinyl groups on both terminals and a hydrohalosilane in the presence of a hydrosilylation catalyst and an ether compound having no aliphatic triple bond is also described.

RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

IT Silanes

RL: IMF (Industrial manufacture); PREP (Preparation)  
(carbosilanes; preparation of carbosilane halosilylated at terminal C atom(s))

IT Hydrosilylation

(preparation of carbosilane halosilylated at terminal C atom(s))

IT Ethers, reactions

Polyoxyalkylenes, reactions

RL: RGT (Reagent); RACT (Reactant or reagent)

(preparation of carbosilane halosilylated at terminal C atom(s))

IT 78-79-5, Isoprene, reactions 106-99-0, 1,3-Butadiene, reactions

592-42-7, 1,5-Hexadiene 1647-16-1, 1,9-Decadiene

RL: RCT (Reactant); RACT (Reactant or reagent)

(hydrosilylation; preparation of carbosilane halosilylated at terminal C atom(s))

IT 60-29-7, Diethyl ether, reactions 109-99-9,

Tetrahydrofuran, reactions 111-96-6, Diethylene glycol dimethyl

ether 112-73-2, Diethylene glycol dibutyl ether

123-91-1, 1,4-Dioxane, reactions 142-96-1,

Di(n-butyl) ether 25322-68-3, Polyethylene glycol

RL: RGT (Reagent); RACT (Reactant or reagent)

(preparation of carbosilane halosilylated at terminal C atom(s))

L12 ANSWER 4 OF 8 CAPLUS COPYRIGHT 2008 ACS on STN

AN 2004:1128522 CAPLUS

DN 142:56520

TI Process for preparation of (haloalkyl)chlorosilanes by hydrosilylation of an alkenyl halide with a halosilane in presence of an iridium catalyst and an auxiliary ketone, ether, quinone, anhydride, unsatd. hydrocarbon or their mixtures

IN Galland, Jean Christophe; Guennouni, Nathalie

PA Rhodia Chimie, Fr.; Rhone Poulenc Chimie

SO Fr. Demande, 24 pp.

CODEN: FRXXBL

DT Patent

LA French

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	FR 2856402	A1	20041224	FR 2003-50222	20030617
	FR 2856402	B1	20050826		
	WO 2004113354	A2	20041229	WO 2004-FR1487	20040616
	WO 2004113354	A3	20050317		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,  
CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,

## CAS ONLINE PRINTOUT

GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,  
 LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,  
 NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY,  
 TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW  
 RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,  
 AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,  
 EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE,  
 SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE,  
 SN, TD, TG

EP 1633761 A2 20060315 EP 2004-767350 20040616  
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
 IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK

CN 1820013 A 20060816 CN 2004-80019676 20040616

JP 2006527742 T 20061207 JP 2006-516295 20040616

US 2007185344 A1 20070809 US 2007-561223 20070227

PRAI FR 2003-50222 A 20030617

WO 2004-FR1487 W 20040616

OS CASREACT 142:56520; MARPAT 142:56520

AB Dialkyl(halo)(haloalkyl)silanes  $\text{XRR1Si}(\text{CH}_2)_x\text{X}$  [X = Cl, Br, iodo; x = 2-10;  
 R, R1 = (un)branched C1-6 alkyl, Ph] are prepared by hydrosilylation of an  
 alkenyl halide  $\text{CH}_2\text{:CH}(\text{CH}_2)_x\text{X}$  (same X, x) with a silane  $\text{XRR2SiH}$  (same X, R,  
 R1) in presence of an Ir(I) or Ir(III) catalyst and an (un)supported  
 auxiliary selected from the group of compds. including (i) ketones, (ii)  
 ethers, (iii) quinones, (iv) anhydrides, (v) (a)cyclic C4-30 unsatd.  
 hydrocarbons that are aromatic and/or contain at least one C:C double bond  
 and/or at least one C.tplbond.C triple bond, where these unsatd. bonds may  
 be conjugated, having 1-8 ethylene and/or acetylenic bonds and may have  
 one or more heteroatoms, (vi) and their mixts., such that when the  
 auxiliary is one or more unsatd. hydrocarbon, then this is combined with  
 at least one other auxiliary of a different type. Preferably,  
 $\text{ClSiMe}_2(\text{CH}_2)_3\text{Cl}$  is prepared from  $\text{ClMe}_2\text{SiH}$  and allyl chloride in presence of  
 $[\text{Ir}(\text{COD})\text{Cl}]_2$  and an auxiliary as defined above. In an example, treating  
 1.194 mol allyl chloride with 1.117 mol  $\text{ClMe}_2\text{SiH}$  in presence of 2.829 x  
 10<sup>-5</sup> mol  $[\text{Ir}(\text{COD})\text{Cl}]_2$ , 10.9 mmol cyclohexanone and 5.648 mmol COD for 2h  
 30 min at 20-25° and subsequent stirring for 20 min gave 98.3%  
 $\text{ClSiMe}_2(\text{CH}_2)_3\text{Cl}$ .

RE.CNT 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

IT Silanes

RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP  
 (Preparation)

(halosilanes, (haloalkyl)chlorosilanes; preparation of  
 (haloalkyl)chlorosilanes by hydrosilylation of alkenyl halide  
 in presence of iridium catalyst and auxiliary ketone, ether,  
 quinone, anhydride, unsatd. hydrocarbon or their mixts.)

IT Hydrosilylation catalysts

(preparation of (haloalkyl)chlorosilanes by hydrosilylation of  
 alkenyl halide in presence of iridium catalyst and auxiliary ketone,  
 ether, quinone, anhydride, unsatd. hydrocarbon or their mixts.)

IT Anhydrides

Ethers, uses

Ketones, uses

Quinones

RL: CAT (Catalyst use); USES (Uses)

(preparation of (haloalkyl)chlorosilanes by hydrosilylation of  
 alkenyl halide in presence of iridium catalyst and auxiliary ketone,  
 ether, quinone, anhydride, unsatd. hydrocarbon or their mixts.)

IT Alkenyl halides

RL: RCT (Reactant); RACT (Reactant or reagent)

(preparation of (haloalkyl)chlorosilanes by hydrosilylation of  
 alkenyl halide in presence of iridium catalyst and auxiliary ketone,

## CAS ONLINE PRINTOUT

ether, quinone, anhydride, unsatd. hydrocarbon or their mixts.)

IT Hydrocarbons, uses  
RL: CAT (Catalyst use); USES (Uses)  
(unsatd.; preparation of (haloalkyl)chlorosilanes by hydrosilylation of alkenyl halide in presence of iridium catalyst and auxiliary ketone, ether, quinone, anhydride, unsatd. hydrocarbon or their mixts.)

IT 60-29-7, Diethyl ether, uses 78-59-1, Isophorone  
92-84-2, Phenothiazine 94-66-6, 2-Allylcyclohexanone 106-51-4,  
2,5-Cyclohexadiene-1,4-dione, uses 106-99-0, 1,3-Butadiene, uses  
108-31-6, Maleic anhydride, uses 108-94-1, Cyclohexanone, uses  
110-71-4, Monoglyme 111-78-4, 1,5-Cyclooctadiene 121-46-0,  
Norbornadiene 363-03-1, Phenylbenzoquinone 592-42-7, 1,5-Hexadiene  
592-57-4, 1,3-Cyclohexadiene 764-78-3, Ethylene glycol divinyl  
ether 930-68-7, 2-Cyclohexen-1-one 1502-22-3 1817-57-8,  
4-Phenyl-3-butyn-2-one 2497-21-4, 4-Hexen-3-one 2554-06-5 2627-95-4  
4335-90-4, 3-Benzylidene-2,4-pentanedione 4594-78-9 4904-61-4,  
1,5,9-Cyclododecatriene 5597-27-3, 3-Methylene-2-norbornanone  
5682-83-7 7539-12-0, Allyl succinic anhydride 12112-67-3,  
Chloro(cyclooctadiene)iridium dimer  
RL: CAT (Catalyst use); USES (Uses)  
(preparation of (haloalkyl)chlorosilanes by hydrosilylation of alkenyl halide in presence of iridium catalyst and auxiliary ketone, ether, quinone, anhydride, unsatd. hydrocarbon or their mixts.)

IT 10605-40-0P, Chloro(3-chloropropyl)dimethylsilane  
RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)  
(preparation of (haloalkyl)chlorosilanes by hydrosilylation of alkenyl halide in presence of iridium catalyst and auxiliary ketone, ether, quinone, anhydride, unsatd. hydrocarbon or their mixts.)

IT 107-05-1, Allyl chloride 1066-35-9, Chloro(dimethyl)silane  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(preparation of (haloalkyl)chlorosilanes by hydrosilylation of alkenyl halide in presence of iridium catalyst and auxiliary ketone, ether, quinone, anhydride, unsatd. hydrocarbon or their mixts.)

L12 ANSWER 5 OF 8 CAPLUS COPYRIGHT 2008 ACS on STN

AN 2001:796394 CAPLUS

DN 135:326202

TI A process for preparing porous interlayer insulating films having low dielectric constant

IN Ko, Min-Jin; Nam, Hye-Yeong; Shin, Dong-Seok; Kang, Jung-Won; Moon, Myung-Sun

PA LG Chem Investment, Ltd, S. Korea

SO Eur. Pat. Appl., 11 pp.

CODEN: EPXXDW

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	-----
PI	EP 1150346	A2	20011031	EP 2001-303846	20010427
	EP 1150346	A3	20040506		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	KR 2001098378	A	20011108	KR 2000-78658	20001219
	US 2001055891	A1	20011227	US 2001-844553	20010427
	US 6806161	B2	20041019		
	JP 2002016057	A	20020118	JP 2001-131769	20010427
	JP 3571004	B2	20040929		
	US 2003216058	A1	20031120	US 2003-447039	20030528
	US 6743471	B2	20040601		

## CAS ONLINE PRINTOUT

PRAI KR 2000-22737 A 20000428  
KR 2000-78658 A 20001219  
US 2001-844553 A3 20010427

AB The present invention relates to low dielec. materials essential for a semiconductor having high d. and high performance of the next generation, particularly to a process for preparing a porous interlayer insulating film having low dielec. constant containing pores with a size of a few nanometers or less. The present invention provides a process for preparing a porous wiring interlayer insulating film having very low dielec. constant for a semiconductor device comprising the steps of (a) preparing a mixed complex of pore-forming organic mols. and a matrix resin, (b) coating the mixed complex on a substrate, and (c) heating the mixed complex to remove the organic mols. therefrom, thereby forming pores inside the complex. The porous wiring interlayer insulating film having very low dielec. constant prepared according to the process of the present invention has reduced phase-separation, excellent processibility, isotropic structure and very small pores with a size of a few nanometers or less.

IT Silanes

RL: PEP (Physical, engineering or chemical process); PROC (Process)  
(organosilanes; process for preparing porous interlayer insulating films having low dielec. constant)

IT Crosslinking

Hydrosilylation

Thermal decomposition

(process for preparing porous interlayer insulating films having low dielec. constant)

IT 108-10-1, Methylisobutylketone 109-99-9, Tetrahydrofuran, uses  
9004-74-4, Polyethylene glycol monomethyl ether

RL: NUU (Other use, unclassified); USES (Uses)

(process for preparing porous interlayer insulating films having low dielec. constant)

L12 ANSWER 6 OF 8 CAPLUS COPYRIGHT 2008 ACS on STN

AN 2001:661434 CAPLUS

DN 135:227111

TI Gastro-specific silyl ether prodrugs and their preparation

IN Tremont, Samuel J.; Collins, Paul W.; Fenton, Ricky L.

PA Pharmacia Corp., USA

SO PCT Int. Appl., 55 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 3

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001064690	A1	20010907	WO 2001-US4960	20010216
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
US 6413945	B1	20020702	US 2000-514819	20000228
EP 1261613	A1	20021204	EP 2001-909258	20010216
EP 1261613	B1	20040506		
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR			
JP 2003525301	T	20030826	JP 2001-564186	20010216

## CAS ONLINE PRINTOUT

AT 266034 T 20040515 AT 2001-909258 20010216  
PRAI US 2000-514819 A 20000228  
US 1997-42640P P 19970404  
US 1998-49992 A2 19980330  
WO 2001-US4960 W 20010216  
OS CASREACT 135:227111; MARPAT 135:227111  
AB Silyl ethers AW-SiR1R2R3 (R1, R2 = alkyl, cycloalkyl, alkenyl, alkynyl, aryl, aralkyl, alkaryl, or hydrophilic group; R3 = hydrophilic group; AW = covalently bonded form of a drug AWH, W = O, NH, S, or an enolate group, AWH = prostaglandin, prostacyclin, etc., preferably misoprostol), useful as prodrugs for treatment or prevention of gastric ulcers (no data), are claimed. The hydrophilic group may be either nonneutral, or may be a polyol, preferably polyethylene glycol. This compound serves as a prodrug for the drug AWH. AW-SiR1R2R3 are prepared by reaction of drug AWH with YSiR1R2R7 (same R1, R2; Y = halo, or alkyl-, haloalkyl-, aryl-, alkaryl-, aralkyl- or haloarylsulfonate ester; R7 is substituted by a halo group) and subsequent treatment with a compound containing  $\geq 1$  amino group or a polyol, preferably polyethylene glycol. In examples given, the release rates for R1R2R3Si-O-misoprostol (preparation given; R1 = p-Me3N+CH2C6H4CH2CH2, R2 = Me2CH, R3 = Me2CHCH2, Me2CH, silyl ether attachment sites to misoprostol C-11, C-16) in 0.001 N aqueous HCl + MeCN varied from 0.105-0.66%/min.

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

IT Silanes  
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(alkoxy; preparation of silyl ether derivs. of misoprostol and other drugs, containing hydrophilic group, as prodrugs for gastric ulcers)

IT Polyoxyalkylenes, reactions  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(coupling reaction of, with silyl ether derivative of misoprostol)

IT Drug delivery systems  
(prodrugs; silyl ether derivs. of misoprostol and other drugs, containing hydrophilic group, for gastric ulcers)

IT Stomach, disease  
(ulcer, treatment or prevention of; silyl ether derivs. of misoprostol and other drugs, containing hydrophilic group, as prodrugs for gastric ulcers)

IT 14694-95-2, Wilkinson's catalyst 81032-58-8  
RL: CAT (Catalyst use); USES (Uses)  
(catalytic hydrosilylation of vinylbenzyl chloride)

IT 25322-68-3, Polyethylene glycol  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(coupling reaction of, with silyl ether derivative of misoprostol)

IT 1592-20-7, p-Vinylbenzyl chloride  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(hydrosilylation of)

IT 18209-66-0, Diisopropylsilane 141681-89-2  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(hydrosilylation of vinylbenzyl chloride by)

IT 17873-11-9P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(preparation and hydrosilylation of vinylbenzyl chloride by)

IT 358722-65-3P 358722-69-7P  
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(preparation of gastro-specific silyl ether prodrugs)

L12 ANSWER 7 OF 8 CAPLUS COPYRIGHT 2008 ACS on STN

AN 2000:537651 CAPLUS

DN 133:281909

TI Stoichiometric and Catalytic Activation of Si-H Bonds by a Triruthenium Carbonyl Cluster, ( $\mu_3, \eta^2: \eta^3: \eta^5$ -acenaphthylene)Ru<sub>3</sub>(CO)<sub>7</sub>: Isolation of the Oxidative Adducts, Catalytic Hydrosilylation of Aldehydes, Ketones, and Acetals, and Catalytic Polymerization of Cyclic Ethers

AU Nagashima, Hideo; Suzuki, Akihiro; Iura, Takafumi; Ryu, Kazuhiro; Matsubara, Kouki

CS Institute of Advanced Material Study Graduate School of Engineering Science and CREST Japan Science and Technology Corporation (JST), Kyushu University, Kasuga Fukuoka, 816-8580, Japan

SO Organometallics (2000), 19(18), 3579-3590  
CODEN: ORGND7; ISSN: 0276-7333

PB American Chemical Society

DT Journal

LA English

OS CASREACT 133:281909

AB Treatment of the Ru cluster ( $\mu_3, \eta^2: \eta^3: \eta^5$ -acenaphthylene)Ru<sub>3</sub>(CO)<sub>7</sub> (1) with stoichiometric amts. of trialkylsilanes results in liberation of a CO ligand followed by oxidative addition of a Si-H bond. The trinuclear silyl complexes ( $\mu_3, \eta^2: \eta^3: \eta^5$ -acenaphthylene)Ru<sub>3</sub>(H)(SiR<sub>3</sub>)(CO)<sub>6</sub> (2) were isolated in good yield. They were characterized by NMR spectroscopy and x-ray crystallog. Compound 1 catalyzes the hydrosilylation of olefins, acetylenes, ketones, and aldehydes. In particular, the reactions of aldehydes and ketones proceed at room temperature to form the corresponding silyl ethers in good yield; the catalytic activities are superior to those with RhCl(PPh<sub>3</sub>)<sub>3</sub>. The RhCl(PPh<sub>3</sub>)<sub>3</sub>-catalyzed hydrosilylation of ketones with Me<sub>2</sub>(H)SiCH<sub>2</sub>CH<sub>2</sub>Si(H)Me<sub>2</sub> results in selective reaction of only one Si-H terminus, while similar reactions, when catalyzed by 1, allow use of both Si-H groups. Significantly different regio- and stereoselectivities, compared with those obtained in reactions catalyzed by RhCl(PPh<sub>3</sub>)<sub>3</sub>, also were observed in the hydrosilylation of  $\alpha, \beta$ -unsatd. carbonyl compds. and 4-tert-butylcyclohexanone, resp. The reactions with acetals and cyclic ethers also take place under similar conditions. The reaction of trialkylsilanes with an excess of a cyclic ether resulted in ring-opening polymerization. Polymerization of THF was studied as a representative

example. Treatment of trialkylsilanes with an excess of THF (10-102 equiv with respect to silanes) in the presence of a catalytic amount of 1 gave polytetrahydrofuran with Mn = 1000-200,000 and Mw/Mn = 1.3-2.0. Changing the ratio of THF to HSiR<sub>3</sub> can control the mol. weight. NMR studies suggested that the structure of the polymer is R<sub>3</sub>SiO-[(CH<sub>2</sub>)<sub>4</sub>O]<sub>n</sub>-CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>. Mechanistic considerations based on differences in the catalytic activities between the catalysts 1 and 2 are discussed.

RE.CNT 87 THERE ARE 87 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

IT Silanes

RL: SPN (Synthetic preparation); PREP (Preparation)  
(alkoxy; preparation by hydrosilylation of aldehydes and ketones  
catalyzed by ruthenium acenaphthylene carbonyl cluster)

IT Ethers, reactions

RL: RCT (Reactant); RACT (Reactant or reagent)  
(cyclic; reactions with hydrosilanes catalyzed by ruthenium  
acenaphthylene carbonyl cluster)

IT Acetals

Aldehydes, reactions

Alkenes, reactions

CAS ONLINE PRINTOUT

- Alkynes
- Ketones, reactions
- RL: RCT (Reactant); RACT (Reactant or reagent)  
(hydrosilylation catalyzed by ruthenium acenaphthylene carbonyl cluster)
- IT Stereochemistry  
(of hydrosilylation of substituted cyclohexanone catalyzed by ruthenium acenaphthylene carbonyl cluster compared to other catalysts)
- IT Regiochemistry  
(of hydrosilylation of unsatd. carbonyl compds. catalyzed by ruthenium acenaphthylene carbonyl cluster compared to other catalysts)
- IT Polyoxyalkylenes, preparation
- RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation by ring-opening polymerization of cyclic ethers catalyzed by ruthenium trinuclear acenaphthylene carbonyl cluster)
- IT Polymerization catalysts  
(ring-opening; ruthenium acenaphthylene carbonyl cluster for cyclic ethers)
- IT Hydrosilylation catalysts  
(ruthenium acenaphthylene carbonyl cluster as)
- IT Cluster compounds
- RL: CAT (Catalyst use); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)  
(ruthenium acenaphthylene carbonyl; oxidative addition by hydrosilanes and catalysis of hydrosilylation and ring-opening polymerization of cyclic ethers by)
- IT Carbonyl compounds (organic), reactions
- RL: RCT (Reactant); RACT (Reactant or reagent)  
( $\alpha,\beta$ -unsatd.; regiochem. of hydrosilylation in presence of ruthenium acenaphthylene carbonyl cluster compared to other catalysts)
- IT 766-77-8, Dimethyl(phenyl)silane
- RL: RCT (Reactant); RACT (Reactant or reagent)  
(coordinative oxidative addition to ruthenium and hydrosilylation of unsatd. organic compds. and ring-opening polymerization of cyclic ethers catalyzed by ruthenium trinuclear acenaphthylene carbonyl cluster)
- IT 617-86-7, Triethylsilane
- RL: RCT (Reactant); RACT (Reactant or reagent)  
(coordinative oxidative addition to ruthenium and hydrosilylation of unsatd. organic compds. catalyzed by ruthenium trinuclear acenaphthylene carbonyl cluster)
- IT 25702-20-9DP, Poly(cyclohexene oxide), dimethylphenylsilyl-terminated  
25722-06-9DP, Poly(oxetane), dimethylphenylsilyl-terminated 299964-19-5P  
299964-21-9P
- RL: SPN (Synthetic preparation); PREP (Preparation)  
(formation from cyclic ether and hydrosilane in presence of ruthenium trinuclear acenaphthylene carbonyl cluster)
- IT 18052-58-9P, Butoxydimethyl(phenyl)silane
- RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(formation from cyclic ether and hydrosilane in presence of ruthenium trinuclear acenaphthylene carbonyl cluster and hydrolysis of)
- IT 60-12-8P,  $\beta$ -Phenethyl alcohol 71-36-3P, Butanol, preparation  
108-93-0P, Cyclohexanol, preparation 538-86-3P, Methyl benzyl ether
- RL: SPN (Synthetic preparation); PREP (Preparation)  
(formation from cyclic ether and hydrosilane in presence of ruthenium trinuclear acenaphthylene carbonyl cluster followed by hydrolysis)
- IT 592-43-8P, 2-Hexene 299964-01-5P, (1-Hexenyl)dimethyl(phenyl)silane

CAS ONLINE PRINTOUT

- 299964-03-7P, ((E)-2-Hexenyl)dimethyl(phenyl)silane  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (formation in hydrosilylation of 1-hexene catalyzed by  
 ruthenium trinuclear acenaphthylene carbonyl cluster)
- IT 17988-21-5P, Isopropoxydimethyl(phenyl)silane  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (formation in hydrosilylation of acetone catalyzed by  
 ruthenium trinuclear acenaphthylene carbonyl cluster)
- IT 34074-18-5P, Dimethyl(phenyl)(1-phenylethoxy)silane  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (formation in hydrosilylation of acetophenone catalyzed by  
 ruthenium trinuclear acenaphthylene carbonyl cluster)
- IT 108-94-1P, Cyclohexanone, preparation 823-76-7P, Acetylcyclohexane  
 31499-72-6P, Dihydro- $\alpha$ -ionone  
 RL: BYP (Byproduct); PREP (Preparation)  
 (formation in hydrosilylation of ketone catalyzed by  
 ruthenium trinuclear acenaphthylene carbonyl cluster followed by  
 hydrolysis)
- IT 98-85-1P, 1-Phenylethanol 529-33-9P, 1,2,3,4-Tetrahydro-1-naphthalenol  
 696-71-9P, Cyclooctanol 18325-75-2P, 1-(1-Cyclohexenyl)ethanol  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (formation in hydrosilylation of ketone catalyzed by  
 ruthenium trinuclear acenaphthylene carbonyl cluster followed by  
 hydrolysis)
- IT 63935-90-0P, Dimethyl(phenyl)(1-phenylvinyl)silane 64788-84-7P,  
 (Z)-Dimethyl(phenyl)(2-phenylvinyl)silane 64788-85-8P,  
 (E)-Dimethyl(phenyl)(2-phenylvinyl)silane  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (formation in hydrosilylation of phenylacetylene catalyzed by  
 ruthenium trinuclear acenaphthylene carbonyl cluster)
- IT 109-99-9, reactions  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (hydrosilylation and ring-opening polymerization catalyzed by  
 ruthenium trinuclear acenaphthylene carbonyl cluster followed by  
 hydrolysis)
- IT 67-64-1, Acetone, reactions 75-97-8 98-86-2, reactions 502-49-8,  
 Cyclooctanone 529-34-0, 3,4-Dihydro-1(2H)-naphthalenone 536-74-3  
 592-41-6, 1-Hexene, reactions 932-66-1, 1-(1-Cyclohexenyl)ethanone  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (hydrosilylation catalyzed by ruthenium trinuclear  
 acenaphthylene carbonyl cluster)
- IT 20152-11-8, 1,2-Bis(dimethylsilyl)ethane  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (hydrosilylation of unsatd. organic compds. and reactions with  
 cyclic ethers catalyzed by ruthenium trinuclear  
 acenaphthylene carbonyl cluster)
- IT 758-21-4, Ethyldimethylsilane 775-12-2, Diphenylsilane  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (hydrosilylation of unsatd. organic compds. catalyzed by  
 ruthenium trinuclear acenaphthylene carbonyl cluster)
- IT 106-23-0P 108-10-1P  
 RL: BYP (Byproduct); PREP (Preparation)  
 (minor formation in hydrosilylation of ketone catalyzed by  
 ruthenium trinuclear acenaphthylene carbonyl cluster followed by  
 hydrolysis)
- IT 151364-75-9, ( $\mu_3, \eta^2: \eta^3: \eta^5$ -Acenaphthylene)heptacarbonyltriru  
 thenium  
 RL: CAT (Catalyst use); RCT (Reactant); RACT (Reactant or reagent); USES  
 (Uses)  
 (oxidative addition by hydrosilanes and catalysis of  
 hydrosilylation and ring-opening polymerization by)

## CAS ONLINE PRINTOUT

- IT 81256-47-5P, ((cis-4-tert-Butylcyclohexyl)oxy)triethylsilane  
 81256-50-0P, ((cis-4-tert-Butylcyclohexyl)oxy)dimethyl(phenyl)silane  
 81256-52-2P, ((cis-4-tert-Butylcyclohexyl)oxy)diphenylsilane  
 299964-22-0P, 1,2-Bis((cis-4-tert-butylcyclohexyl)dimethylsilyl)ethane  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
 (Reactant or reagent)  
 (preferred formation in hydrosilylation of ketone catalyzed  
 by ruthenium trinuclear acenaphthylene carbonyl cluster and hydrolysis  
 of)
- IT 624-15-7P, 3,7-Dimethyl-2,6-octadien-1-ol 822-67-3P, 2-Cyclohexen-1-ol  
 937-05-3P, cis-4-tert-Butylcyclohexanol 4325-82-0P, 4-Methyl-3-penten-2-  
 ol 25312-34-9P, (3E)-4-(2,6,6-Trimethyl-2-cyclohexenyl)-3-buten-2-ol  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preferred formation in hydrosilylation of ketone catalyzed  
 by ruthenium trinuclear acenaphthylene carbonyl cluster followed by  
 hydrolysis)
- IT 299963-87-4P 299963-89-6P  
 RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation);  
 USES (Uses)  
 (preparation and lack of catalytic activity in hydrosilylation)
- IT 299963-93-2P, 1,2-Bis(dimethyl(1-phenylethoxy)silyl)ethane 299963-95-4P,  
 1,2-Bis(((cyclooctyl)oxy)dimethylsilyl)ethane 299963-97-6P,  
 1,2-Bis(dimethyl(1,2,2-(trimethyl)propoxy)silyl)ethane  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation by hydrosilylation catalyzed by ruthenium trinuclear  
 acenaphthylene carbonyl cluster)
- IT 24979-97-3DP, Poly(tetrahydrofuran), dimethylphenylsilyl-  
 terminated 299963-99-8P 299964-07-1P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation by ring-opening polymerization of cyclic ether catalyzed by  
 ruthenium trinuclear acenaphthylene carbonyl cluster)
- IT 299963-91-0P  
 RL: CAT (Catalyst use); PRP (Properties); SPN (Synthetic preparation);  
 PREP (Preparation); USES (Uses)  
 (preparation, crystal structure and lack of catalytic activity in  
 hydrosilylation)
- IT 127-41-3,  $\alpha$ -Ionone 141-79-7, Mesityl oxide 930-68-7,  
 2-Cyclohexenone 5392-40-5, Citral  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (regioselective hydrosilylation catalyzed by ruthenium  
 trinuclear acenaphthylene carbonyl cluster)
- IT 98-53-3, 4-tert-Butylcyclohexanone  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (stereoselective hydrosilylation catalyzed by ruthenium  
 trinuclear acenaphthylene carbonyl cluster)

L12 ANSWER 8 OF 8 CAPLUS COPYRIGHT 2008 ACS on STN

AN 1998:256405 CAPLUS

DN 128:322724

TI Hydrophilic silicone rubber compositions containing silanes or siloxanes  
 with cyclic ether groups

IN Takahashi, Masaharu; Igarashi, Minoru; Sasabara, Norio

PA Shin-Etsu Chemical Industry Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 10 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

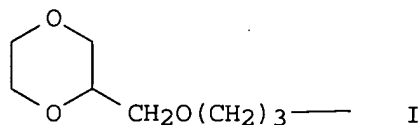
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 10110099	A	19980428	JP 1996-287388	19961009

## CAS ONLINE PRINTOUT

JP 3409612	B2	20030526		
JP 2002371183	A	20021226	JP 2002-132371	20020508
JP 3801529	B2	20060726		
PRAI JP 1996-287388	A3	19961009		

GI



- AB The compns. contain (A) 100 parts diorganopolysiloxanes  $\text{R}_n\text{SiO}(4-n)/2$  ( $\text{R}_1$  = monovalent hydrocarbyl;  $n = 1.98-2.02$ ) with d.p.  $\geq 100$ , (B) 10-70 parts  $\text{SiO}_2$  reinforcement with sp. surface area  $\geq 50 \text{ m}^2/\text{g}$  10-70, (C) 1-100 parts organosilanes  $\text{R}_2\text{R}_3(\text{R}_4\text{O})_2\text{Si}$  (I;  $\text{R}_2$  = monovalent hydrocarbyl;  $\text{R}_3$  = cyclic ether II;  $\text{R}_4$  = H, C1-5 alkyl) or their condensate siloxanes with d.p.  $\leq 20$ , and (D) hardeners. Also claimed is hydrophilic silicone rubber compns. containing 100 parts II, 10-70 parts the  $\text{SiO}_2$ , and hardeners. Thus, 100 parts rubber-type siloxane composed of  $\text{Me}_2\text{SiO}$  unit 99.825,  $\text{MeViSiO}$  unit ( $\text{Vi}$  = vinyl) 0.15, and  $\text{Me}_2\text{ViSiO}$  unit 0.025 mol%, 40 parts Aerosil 200, and 20 parts [3-[(1,4-dioxane-2-yl)methoxy]propyl]methyldihydroxysilane were mixed to give a base compound, 100 parts of which was mixed with 0.5 part chloroplatinic acid alc. solution and 1.2 parts Me H siloxane and pressed at  $120^\circ$  to give rubber sheets showing JIS A hardness 50, tensile strength 47 kg/cm<sup>2</sup>, elongation 850%, and contact angle with water 69%.
- IT Polysiloxanes, properties  
 RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)  
 (Me hydrogen, hydrosilylation by, of dimethylvinylsiloxyl-terminated di-Me Me vinyl siloxane, for rubber; hydrophilic silicone rubber compns. containing silanes or siloxanes with cyclic ether groups)
- IT Silicone rubber, preparation  
 RL: IMF (Industrial manufacture); PRP (Properties); PREP (Preparation)  
 (di-Me, Me vinyl; hydrophilic silicone rubber compns. containing silanes or siloxanes with cyclic ether groups)
- IT Silicone rubber, preparation  
 RL: IMF (Industrial manufacture); PRP (Properties); PREP (Preparation)  
 (with cyclic ether groups; hydrophilic silicone rubber compns.)
- IT 7631-86-9, Aerosil 200, uses  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (colloidal; hydrophilic silicone rubber compns. containing silanes or siloxanes with cyclic ether groups)
- IT 22984-54-9, Methyltri(methyl ethyl ketoximo)silane  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (hardener, for siloxanes with cyclic ether groups; hydrophilic silicone rubber compns.)
- IT 190734-06-6 206646-10-8D, silanol-terminated  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (hydrophilic silicone rubber compns. containing silanes or siloxanes with cyclic ether groups)
- IT 205052-55-7P  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); PREP (Preparation); USES (Uses)  
 (hydrosilylation of, with Me H siloxane, for rubber; hydrophilic silicone rubber compns.)

CAS ONLINE PRINTOUT

IT 155665-02-4D, Dimethylsilanediol-methylvinylsilanediol copolymer,  
dimethylvinylsiloxyl-terminated  
RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)  
(hydrosilylation of, with Me H siloxane, for rubber;  
hydrophilic silicone rubber compns. containing silanes or  
siloxanes with cyclic ether groups)

IT 15721-05-8, Heptamethylcyclotetrasiloxane 41166-62-5, 2-Allyloxymethyl-  
1,4-dioxane 84409-40-5,  
Pentamethylcyclotrisiloxane  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(starting material for; silanes or siloxanes with cyclic  
ether groups for hydrophilic silicone rubber compns.)

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## CAS ONLINE PRINTOUT

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(FILE 'HOME' ENTERED AT 08:18:48 ON 02 JAN 2008)

FILE 'CAPLUS' ENTERED AT 08:19:04 ON 02 JAN 2008

E US 20070055074/PN

L1 1 S E3  
L2 26680 S SILANES/IT  
L3 6495 S HYDROSILYLATION/IT  
L4 284371 S ETHERS/IT OR ETHER/IT  
L5 87 S L2 AND L3 AND L4  
L6 7620 S DIETHYL ETHER/IT  
L7 15031 S TETRAHYDROFURAN/IT  
L8 5592 S 1,4-DIOXANE/IT  
L9 636 S 112-73-2/IT  
L10 103364 S 25322-68-3/IT  
L11 129096 S L6 OR L7 OR L8 OR L9 OR L10  
L12 8 S L11 AND L5  
E ETHERS, REACTIONS/IT  
L13 5895 S ETHERS, REACTIONS/IT

=&gt; s l2 and l3 and l13

L14 3 L2 AND L3 AND L13

=&gt; d bib abs kwic 1-3

L14 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2008 ACS on STM

AN 2005:324168 CAPLUS

DN 142:375569

TI Preparation of a halosilylated chain hydrocarbon

IN Saiki, Takeaki

PA Dow Corning Toray Silicone Co., Ltd., Japan

SO PCT Int. Appl., 35 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005033116	A1	20050414	WO 2004-JP14908	20041001
	W:				
	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW:				
	BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	JP 2006117532	A	20060511	JP 2003-344602	20031002
	EP 1668018	A1	20060614	EP 2004-773705	20041001
	EP 1668018	B1	20071128		
	R:				
	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK				
	US 2007055074	A1	20070308	US 2006-573792	20061106
PRAI	JP 2003-344602	A	20031002		
	WO 2004-JP14908	W	20041001		

OS MARPAT 142:375569

AB The preparation of a chain hydrocarbon halosilylated at its terminal C atom(s)

CAS ONLINE PRINTOUT

by subjecting a diene-type compound and a hydrohalosilane to a hydrosilylation reaction in the presence of a hydrosilylation catalyst and an ether compound having no aliphatic triple bond is described. Conducting a hydrosilylation reaction between a diene-type compound that has vinyl groups on both terminals and a hydrohalosilane in the presence of a hydrosilylation catalyst and an ether compound having no aliphatic triple bond is also described.

RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

IT Silanes  
RL: IMF (Industrial manufacture); PREP (Preparation)  
(carbosilanes; preparation of carbosilane halosilylated at terminal C atom(s))  
IT Hydrosilylation  
(preparation of carbosilane halosilylated at terminal C atom(s))  
IT Ethers, reactions  
Polyoxyalkylenes, reactions  
RL: RGT (Reagent); RACT (Reactant or reagent)  
(preparation of carbosilane halosilylated at terminal C atom(s))  
IT 78-79-5, Isoprene, reactions 106-99-0, 1,3-Butadiene, reactions  
592-42-7, 1,5-Hexadiene 1647-16-1, 1,9-Decadiene  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(hydrosilylation; preparation of carbosilane halosilylated at terminal C atom(s))

L14 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2008 ACS on STN

AN 2002:211938 CAPLUS

DN 137:337985

TI Practical procedures for hydrosilylation of ketones and silane-induced ring-opening polymerization of cyclic ethers by prior activation of the cluster catalyst by hydrosilanes: improved synthetic procedures and mechanistic implication on the catalytically active species

AU Matsubara, Kouki; Iura, Takafumi; Maki, Tomoyuki; Terasawa, Jun-ichi; Nagashima, Hideo

CS Graduate Sch. Eng. Sciences, Kyushu Univ., Fukuoka, 816-8580, Japan

SO Kyushu Daigaku Kino Busshitsu Kagaku Kenkyusho Hokoku (2001), 15(2), 183-188

CODEN: KDBHFS; ISSN: 0914-3793

PB Kyushu Daigaku Kino Busshitsu Kagaku Kenkyusho

DT Journal

LA English

OS CASREACT 137:337985

AB Pre-activation of ( $\mu_2, \eta^2: \eta^3: \eta^5$ -acenaphthylene)Ru<sub>3</sub>(CO)<sub>7</sub> (1) by hydrosilanes in a small amount of dioxane provides a novel, convenient and useful procedure for hydrosilylation of carbonyl compds. and silane-induced ring-opening polymerization of cyclic ethers and a cyclic siloxane. The initial step of the catalytic cycle was investigated by NMR detection of products formed by the oxidative addition of hydrosilanes to 1. A possibility for the involvement of cluster species in the catalytic cycle is discussed.

RE.CNT 38 THERE ARE 38 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

IT Hydrosilylation  
(carbonyl compds.; improved procedure with acenaphthylene-ruthenium catalyst, pre-activated by hydrosilane)  
IT Ethers, reactions  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(cyclic, ring-opening polymerization; improved procedure with acenaphthylene-ruthenium catalyst, pre-activated by hydrosilane)  
IT Silanes  
RL: RCT (Reactant); RACT (Reactant or reagent)

- (hydrosilanes; hydrosilylation of carbonyl compds. with improved procedure involving acenaphthylene-ruthenium catalyst pre-activation)
- IT Carbonyl compounds (organic), reactions  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(improved hydrosilylation procedure with acenaphthylene-ruthenium catalyst, pre-activated by hydrosilane)
- IT 299963-87-4  
RL: CAT (Catalyst use); FMU (Formation, unclassified); PRP (Properties); FORM (Formation, nonpreparative); USES (Uses)  
(NMR spectra, structure; hydrosilane oxidative addition product, in relation to acenaphthylene-ruthenium catalyst activation for hydrosilylation and ring-opening polymerization)
- IT 445041-13-4  
RL: FMU (Formation, unclassified); PRP (Properties); FORM (Formation, nonpreparative)  
(NMR spectra, structure; hydrosilane oxidative addition product, in relation to acenaphthylene-ruthenium catalyst activation for hydrosilylation and ring-opening polymerization)
- IT 151364-75-9  
RL: CAT (Catalyst use); CPS (Chemical process); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)  
(activation by hydrosilane, mechanism; hydrosilylation of carbonyl compds. and ring-opening polymerization of cyclic ethers and cyclic siloxane with pre-activated acenaphthylene ruthenium complex)
- IT 766-77-8, Dimethylphenylsilane  
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)  
(catalyst activation, mechanism, hydrosilylation with; hydrosilylation of carbonyl compds. and ring-opening polymerization of cyclic ethers and cyclic siloxane with pre-activated acenaphthylene ruthenium complex)
- IT 98-53-3 98-86-2, reactions 103-25-3  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(hydrosilylation of carbonyl compds. with acenaphthylene ruthenium complex, pre-activated by hydrosilane)
- IT 34074-18-5P 81256-50-0P 350694-01-8P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(hydrosilylation of carbonyl compds. with acenaphthylene ruthenium complex, pre-activated by hydrosilane)
- IT 216859-39-1  
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)  
(oxidative addition of hydrosilane with partial hydrogenation of azulene ligand, in relation to acenaphthylene-ruthenium catalyst activation for hydrosilylation and ring-opening polymerization)
- L14 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2008 ACS on STN  
AN 2000:537651 CAPLUS  
DN 133:281909  
TI Stoichiometric and Catalytic Activation of Si-H Bonds by a Triruthenium Carbonyl Cluster, ( $\mu_3, \eta^2: \eta^3: \eta^5$ -acenaphthylene)Ru<sub>3</sub>(CO)<sub>7</sub>: Isolation of the Oxidative Adducts, Catalytic Hydrosilylation of Aldehydes, Ketones, and Acetals, and Catalytic Polymerization of Cyclic Ethers  
AU Nagashima, Hideo; Suzuki, Akihiro; Iura, Takafumi; Ryu, Kazuhiro; Matsubara, Kouki  
CS Institute of Advanced Material Study Graduate School of Engineering Science and CREST Japan Science and Technology Corporation (JST), Kyushu University, Kasuga Fukuoka, 816-8580, Japan  
SO Organometallics (2000), 19(18), 3579-3590

## CAS ONLINE PRINTOUT

CODEN: ORGND7; ISSN: 0276-7333

PB American Chemical Society

DT Journal

LA English

OS CASREACT 133:281909

AB Treatment of the Ru cluster ( $\mu_3, \eta^2: \eta^3: \eta^5$ -acenaphthylene)Ru<sub>3</sub>(CO)<sub>7</sub> (1) with stoichiometric amts. of trialkylsilanes results in liberation of a CO ligand followed by oxidative addition of a Si-H bond. The trinuclear silyl complexes ( $\mu_3, \eta^2: \eta^3: \eta^5$ -acenaphthylene)Ru<sub>3</sub>(H)(SiR<sub>3</sub>)(CO)<sub>6</sub> (2) were isolated in good yield. They were characterized by NMR spectroscopy and x-ray crystallog. Compound 1 catalyzes the hydrosilylation of olefins, acetylenes, ketones, and aldehydes. In particular, the reactions of aldehydes and ketones proceed at room temperature to form the corresponding silyl ethers in good yield; the catalytic activities are superior to those with RhCl(PPh<sub>3</sub>)<sub>3</sub>. The RhCl(PPh<sub>3</sub>)<sub>3</sub>-catalyzed hydrosilylation of ketones with Me<sub>2</sub>(H)SiCH<sub>2</sub>CH<sub>2</sub>Si(H)Me<sub>2</sub> results in selective reaction of only one Si-H terminus, while similar reactions, when catalyzed by 1, allow use of both Si-H groups. Significantly different regio- and stereoselectivities, compared with those obtained in reactions catalyzed by RhCl(PPh<sub>3</sub>)<sub>3</sub>, also were observed in the hydrosilylation of  $\alpha, \beta$ -unsatd. carbonyl compds. and 4-tert-butylcyclohexanone, resp. The reactions with acetals and cyclic ethers also take place under similar conditions. The reaction of trialkylsilanes with an excess of a cyclic ether resulted in ring-opening polymerization. Polymerization of THF was studied as a

representative

example. Treatment of trialkylsilanes with an excess of THF (10-102 equiv with respect to silanes) in the presence of a catalytic amount of 1 gave polytetrahydrofuran with Mn = 1000-200,000 and Mw/Mn = 1.3-2.0. Changing the ratio of THF to HSiR<sub>3</sub> can control the mol. weight. NMR studies suggested that the structure of the polymer is R<sub>3</sub>SiO-[(CH<sub>2</sub>)<sub>4</sub>O]<sub>n</sub>-CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>. Mechanistic considerations based on differences in the catalytic activities between the catalysts 1 and 2 are discussed.

RE.CNT 87 THERE ARE 87 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

IT Silanes

RL: SPN (Synthetic preparation); PREP (Preparation)  
(alkoxy; preparation by hydrosilylation of aldehydes and ketones  
catalyzed by ruthenium acenaphthylene carbonyl cluster)

IT Ethers, reactions

RL: RCT (Reactant); RACT (Reactant or reagent)  
(cyclic; reactions with hydrosilanes catalyzed by ruthenium  
acenaphthylene carbonyl cluster)

IT Acetals

Aldehydes, reactions

Alkenes, reactions

Alkynes

Ketones, reactions

RL: RCT (Reactant); RACT (Reactant or reagent)  
(hydrosilylation catalyzed by ruthenium acenaphthylene  
carbonyl cluster)

IT Stereochemistry

(of hydrosilylation of substituted cyclohexanone catalyzed by  
ruthenium acenaphthylene carbonyl cluster compared to other catalysts)

IT Regiochemistry

(of hydrosilylation of unsatd. carbonyl compds. catalyzed by  
ruthenium acenaphthylene carbonyl cluster compared to other catalysts)

IT Hydrosilylation catalysts

(ruthenium acenaphthylene carbonyl cluster as)

IT Cluster compounds

RL: CAT (Catalyst use); RCT (Reactant); RACT (Reactant or reagent); USES

## CAS ONLINE PRINTOUT

## (Uses)

(ruthenium acenaphthylene carbonyl; oxidative addition by hydrosilanes and catalysis of hydrosilylation and ring-opening polymerization of cyclic ethers by)

- IT Carbonyl compounds (organic), reactions  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 ( $\alpha,\beta$ -unsatd.; regiochem. of hydrosilylation in presence of ruthenium acenaphthylene carbonyl cluster compared to other catalysts)
- IT 766-77-8, Dimethyl(phenyl)silane  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (coordinative oxidative addition to ruthenium and hydrosilylation of unsatd. organic compds. and ring-opening polymerization of cyclic ethers catalyzed by ruthenium trinuclear acenaphthylene carbonyl cluster)
- IT 617-86-7, Triethylsilane  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (coordinative oxidative addition to ruthenium and hydrosilylation of unsatd. organic compds. catalyzed by ruthenium trinuclear acenaphthylene carbonyl cluster)
- IT 592-43-8P, 2-Hexene 299964-01-5P, (1-Hexenyl)dimethyl(phenyl)silane 299964-03-7P, ((E)-2-Hexenyl)dimethyl(phenyl)silane  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (formation in hydrosilylation of 1-hexene catalyzed by ruthenium trinuclear acenaphthylene carbonyl cluster)
- IT 17988-21-5P, Isopropoxydimethyl(phenyl)silane  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (formation in hydrosilylation of acetone catalyzed by ruthenium trinuclear acenaphthylene carbonyl cluster)
- IT 34074-18-5P, Dimethyl(phenyl)(1-phenylethoxy)silane  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (formation in hydrosilylation of acetophenone catalyzed by ruthenium trinuclear acenaphthylene carbonyl cluster)
- IT 108-94-1P, Cyclohexanone, preparation 823-76-7P, Acetylcyclohexane 31499-72-6P, Dihydro- $\alpha$ -ionone  
 RL: BYP (Byproduct); PREP (Preparation)  
 (formation in hydrosilylation of ketone catalyzed by ruthenium trinuclear acenaphthylene carbonyl cluster followed by hydrolysis)
- IT 98-85-1P, 1-Phenylethanol 529-33-9P, 1,2,3,4-Tetrahydro-1-naphthalenol 696-71-9P, Cyclooctanol 18325-75-2P, 1-(1-Cyclohexenyl)ethanol  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (formation in hydrosilylation of ketone catalyzed by ruthenium trinuclear acenaphthylene carbonyl cluster followed by hydrolysis)
- IT 63935-90-0P, Dimethyl(phenyl)(1-phenylvinyl)silane 64788-84-7P, (Z)-Dimethyl(phenyl)(2-phenylvinyl)silane 64788-85-8P, (E)-Dimethyl(phenyl)(2-phenylvinyl)silane  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (formation in hydrosilylation of phenylacetylene catalyzed by ruthenium trinuclear acenaphthylene carbonyl cluster)
- IT 109-99-9, reactions  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (hydrosilylation and ring-opening polymerization catalyzed by ruthenium trinuclear acenaphthylene carbonyl cluster followed by hydrolysis)
- IT 67-64-1, Acetone, reactions 75-97-8 98-86-2, reactions 502-49-8, Cyclooctanone 529-34-0, 3,4-Dihydro-1(2H)-naphthalenone 536-74-3 592-41-6, 1-Hexene, reactions 932-66-1, 1-(1-Cyclohexenyl)ethanone  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (hydrosilylation catalyzed by ruthenium trinuclear acenaphthylene carbonyl cluster)

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- IT 20152-11-8, 1,2-Bis(dimethylsilyl)ethane  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (hydrosilylation of unsatd. organic compds. and reactions with cyclic ethers catalyzed by ruthenium trinuclear acenaphthylene carbonyl cluster)
- IT 758-21-4, Ethyldimethylsilane 775-12-2, Diphenylsilane  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (hydrosilylation of unsatd. organic compds. catalyzed by ruthenium trinuclear acenaphthylene carbonyl cluster)
- IT 106-23-0P 108-10-1P  
 RL: BYP (Byproduct); PREP (Preparation)  
 (minor formation in hydrosilylation of ketone catalyzed by ruthenium trinuclear acenaphthylene carbonyl cluster followed by hydrolysis)
- IT 151364-75-9, ( $\mu_3, \eta^2: \eta^3: \eta^5$ -Acenaphthylene)heptacarbonyltriruthenium  
 RL: CAT (Catalyst use); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)  
 (oxidative addition by hydrosilanes and catalysis of hydrosilylation and ring-opening polymerization by)
- IT 81256-47-5P, ((cis-4-tert-Butylcyclohexyl)oxy)triethylsilane  
 81256-50-0P, ((cis-4-tert-Butylcyclohexyl)oxy)dimethyl(phenyl)silane  
 81256-52-2P, ((cis-4-tert-Butylcyclohexyl)oxy)diphenylsilane  
 299964-22-0P, 1,2-Bis((cis-4-tert-butylcyclohexyl)dimethylsilyl)ethane  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (preferred formation in hydrosilylation of ketone catalyzed by ruthenium trinuclear acenaphthylene carbonyl cluster and hydrolysis of)
- IT 624-15-7P, 3,7-Dimethyl-2,6-octadien-1-ol 822-67-3P, 2-Cyclohexen-1-ol  
 937-05-3P, cis-4-tert-Butylcyclohexanol 4325-82-0P, 4-Methyl-3-penten-2-ol  
 25312-34-9P, (3E)-4-(2,6,6-Trimethyl-2-cyclohexenyl)-3-buten-2-ol  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preferred formation in hydrosilylation of ketone catalyzed by ruthenium trinuclear acenaphthylene carbonyl cluster followed by hydrolysis)
- IT 299963-87-4P 299963-89-6P  
 RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)  
 (preparation and lack of catalytic activity in hydrosilylation)
- IT 299963-93-2P, 1,2-Bis(dimethyl(1-phenylethoxy)silyl)ethane 299963-95-4P, 1,2-Bis(((cyclooctyl)oxy)dimethylsilyl)ethane 299963-97-6P, 1,2-Bis(dimethyl(1,2,2-(trimethyl)propoxy)silyl)ethane  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation by hydrosilylation catalyzed by ruthenium trinuclear acenaphthylene carbonyl cluster)
- IT 299963-91-0P  
 RL: CAT (Catalyst use); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)  
 (preparation, crystal structure and lack of catalytic activity in hydrosilylation)
- IT 127-41-3,  $\alpha$ -Ionone 141-79-7, Mesityl oxide 930-68-7, 2-Cyclohexenone 5392-40-5, Citral  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (regioselective hydrosilylation catalyzed by ruthenium trinuclear acenaphthylene carbonyl cluster)
- IT 98-53-3, 4-tert-Butylcyclohexanone  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (stereoselective hydrosilylation catalyzed by ruthenium trinuclear acenaphthylene carbonyl cluster)

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